



Washington State Hazardous Waste Plan

1994 Update

Prepared by:

Washington State Department of Ecology
Hazardous Waste and Toxics Reduction Program

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Executive Summary

Washington's first State Hazardous Waste Plan was published in January 1992. The State Plan was intended to be a guide to Ecology, the legislature, generators and citizens alike, regarding hazardous waste management issues. After an extensive development process this plan was designed to be a road map for improving the hazardous waste management system in Washington. There were fifty-nine recommendations in the State Plan for improving the system. One recommendation was to prepare an update every two years to track the progress made in implementing the State Plan recommendations. The law requires periodic revisiting of the plan. This document is the first update to the State Plan.

The Update shows where we are in the continuing process of implementing the State Plan. At present two-thirds (40 out of 59) of the State Plan's recommendations have either been implemented or are in the process of being implemented. Nine of the remaining nineteen recommendations are scheduled to be implemented in the next biennium. State Plan recommendations have been quickly implemented over the last two years. The State Plan has had a profound effect on the Department of Ecology's (Ecology) day-to-day activities. Ecology has increased direct and indirect contact with generators with strong messages to prevent or reduce the generation of hazardous waste and to safely manage wastes.

A direct example of the impact of the State Plan is the "Close to Home" Policy. This policy advocates managing wastes as close to the origin of generation as is possible. As a result, Ecology has developed guidance that allows greater latitude for the treatment of waste on-site by generators. This reduces the risks and costs associated with transporting waste for treatment and encourages the management of wastes at the point of generation.

The Update examines the policy changes and other circumstances that have affected the course set by the State Plan. The focus on pollution prevention in the Hazardous Waste and Toxics Reduction Program (HWTR), as well as throughout the agency has been, and will continue to be, a major influence in the implementation of the State Plan. Where appropriate, the potential or real impacts this focus has had on the hazardous waste management system will be examined.

Introduction

Purpose of this Update

In January 1992, the Washington State Department of Ecology (Ecology) published the first Washington State Hazardous Waste Plan. The State Plan was intended as a guide for Ecology, the legislature, generators and citizens of Washington with regard to hazardous waste management issues.

One of the recommendations of the State Plan was that Ecology prepare an update to the State Plan two years after initial publication to examine the progress made to date in the implementation of the Plan's recommendations. This update fulfills that recommendation and allows the State Plan be a document that is implemented and maintained as a tool for all sectors involved in hazardous waste generation and management.

Further updates, on a two-year cycle, are proposed to keep the State Plan a current and usable document. In addition, every six years a new plan will be developed by Ecology. The first of these is planned for 1997 when a major effort to identify and examine hazardous waste management issues, and possibly conduct further research, will be undertaken in a fashion similar to that of the first planning effort.

Background of the State Plan Process

The legislature mandated that Ecology develop a State Hazardous Waste Plan. Ecology chose a three phased approach to meet the intent of the law as quickly as possible and then go beyond the requirements of the law by entering into a comprehensive planning process. To develop a plan which works statewide, Ecology decided to address each issue in a comprehensive fashion.

Phase One fulfilled the mandate to provide a baseline of understanding of the hazardous waste management system by assessing statewide capacity to manage wastes and forecasting future hazardous waste generation. Phase One was completed in March 1990, with the publication of *Hazardous Waste in Washington: A Planning Report*.

Phase Two identified problems and issues in the existing hazardous waste management system through surveys and workshops with affected parties. The scope of the State Hazardous Waste Plan was developed as a result of Phase Two.

Phase Three was an intensive process of examination of the problems and issues identified in Phase Two. This process was completed in large part with the advice of a subcommittee of the State Solid Waste Advisory Committee. The committee was comprised of representatives from the public, local government, environmental groups, business and industry. Extensive research efforts were also undertaken to provide specific information on the hazardous waste management system. The outcome of this process was fifty-six consensus recommendations for changes or improvements to the system. The State Plan includes three additional recommendations which were not consensually endorsed by the Subcommittee of the State Solid Waste Advisory Committee, but are included at Ecology's discretion.

Publications

Below is a list of documents and reports written as part of the process of developing the State Plan, all are available through Ecology's Publications Office, (please see front cover for contact information):

Hazardous Waste in Washington: A Planning Report, Publication No. 90-13, March 1990. The culmination of Phase One of the State Plan, the Planning Report examined generation for 1987, projected generation for the next twenty years and assessed hazardous waste management capacity in Washington.

Washington State Hazardous Waste Plan, Publication No. 92-05, January 1992. A comprehensive document, the State Plan entails a summary of the problem, a recommendation for action and a proposed method of implementation for each of fifty-nine issues.

Do the Right Thing Study, Publication No. 92-58, June 1992. This study examines the highest priority, technically feasible management options, and barriers to those options, for selected Washington waste streams.

Needs Assessment for Washington, Publication No. 92-59, June 1992. An assessment of hazardous waste management capacity needs in Washington for the next 10 years based on 1988 generation and management information.

An Evaluation of Atypical Hazardous Wastes, Publication No. 92-60, June 1992. A look at the regulation and management of hazardous wastewaters, hazardous air emissions, used oil, mining wastes, agricultural chemical wastes and wastes from non-notifying generators.

Report of the State Solid Waste Advisory Committee Subcommittee on Hazardous Waste Planning — Recommendations for the State Hazardous Waste Plan, Publication No. 92-61, June 1992. A report detailing the Subcommittee's consensus recommendations which form the basis of the State Plan.

Format and Use of this Update

The update is divided into four chapters. Chapter one examines the status of the State Plan recommendations. Chapter two projects the 1993-1995 work on the recommendations. Some specific projects are discussed in Chapter three. Finally, in Chapter four there is a summary of accomplishments. This format provides a look at the past by reminding us what actions the State Plan recommended, it examines the progress made to date in implementing those recommendations, and it outlines future activities, the policies of state hazardous waste planning and the compelling forces behind them.

The Update is intended to provide the reader with a brief summary of each of the issues examined in the State Plan, and a description of the implementation progress to date. For background information or the complete text of the recommendations, please refer to the original State Hazardous Waste Plan.

Relevant Changes at Ecology

The following major changes at Ecology have occurred since the State Plan was published in January 1992:

- Mary Riveland was named as Ecology's new director in January 1993.
- Program reorganized to enhance pollution prevent and waste reduction to the greatest extent possible and to maximize direct service delivery.
- Ecology has gotten smaller and increased efficiency.
- New Ecology headquarters building in Lacey has allowed staff to all be located under one roof.

Published in January 1992, the State Hazardous Waste Plan contained fifty-nine recommendations for change. This chapter categorizes the recommendations of the original State Plan and examines in detail those which have been implemented and those which are progressing well toward implementation. Table 1 (page) summarizes the status of each recommendation for easy reference. For an overall look at the percentage of recommendations in each status, see Figure 1 on page .

As can be seen in Table 1, each recommendation was numbered with the first digit denoting the chapter of the State Plan in which the recommendation is located. The State Plan was divided into six chapters with a varying number of recommendations in each chapter. Each chapter dealt with a different aspect of the hazardous waste man-

CHAPTER 1

The State Plan Recommendations

Published in January 1992, the State Hazardous Waste Plan contained fifty-nine recommendations for change. This chapter categorizes the recommendations of the original State Plan and examines in detail those which have been implemented and those which are progressing well toward implementation. Table 1 (page) summarizes the status of each recommendation for easy reference. For an overall look at the percentage of recommendations in each status, see Figure 1 on page 17.

As can be seen in Table 1, each recommendation was numbered with the first digit denoting the chapter of the State Plan in which the recommendation is located. The State Plan was divided into six chapters with a varying number of recommendations in each chapter. Each chapter dealt with a different aspect of the hazardous waste management system which was determined through public input to be a key area of concern. A description of each of those areas is provided below.

Chapter 1 - Maximizing the Management Priorities

Recommendations in this chapter dealt with ways to maximize the hazardous waste management priorities. (In descending order, those priorities which are defined by law (RCW 70.105.150) are: waste reduction; waste recycling; physical, chemical and biological treatment; incineration; solidification; and landfilling.) The intent of the recommendations in Chapter 1 was to promote the management of hazardous wastes by the highest management method on that hierarchy as was practicable and feasible.

Chapter 2 - Need for Management Facilities

Recommendations in Chapter 2 focused on how Washington should approach the management of its wastes from a geographic standpoint. The need for waste management facilities at the local, state and regional levels was explored and a series of policy oriented recommendations were developed.

Chapter 3 - Improving the Regulatory System

This chapter contained the largest number of recommendations, all of which dealt with ways to improve the existing regulatory system. Virtually all of these recommendations pinpointed methods for Ecology to improve various aspects of the regulatory system.

Chapter 4 - Review of Siting and Permitting

The recommendations in Chapter 4 looked at ways to improve the Citizen/Proponent Negotiation Process as well as the permitting process for hazardous waste management facilities.

Chapter 5 - Collecting the Right Information

Recommendations in this chapter were directed at the state's hazardous waste information collection system. Information needs were identified and ways were sought to efficiently collect this information.

Chapter 6 - Hazardous Waste Education

Chapter 6 recommendations examined Ecology's efforts to provide education to generators, citizens and others about the generation and proper management of hazardous wastes.

In Table 1, each of the State Plan's fifty-nine recommendations are categorized according to the progress made to date in their implementation. Each recommendation is characterized as one of the following:

- ❖ Implemented (I)
- ❖ In Process (IP)
- ❖ Ongoing (O)
- ❖ Awaiting (A)
- ❖ Pending (P)

The definitions of the categories used can be seen below:

Implemented

Recommendations that were completed as written in the State Plan whether or not the intended goal was accomplished, e.g. unsuccessful legislative proposals.

In Process

Recommendations that have been initiated, but which Ecology must continue working on before implementation can be achieved.

Ongoing

Generally, policy oriented recommendations that have been put into place, but are long-term or ongoing by nature and are not meant to be completed.

Awaiting

Recommendations that are not slated for implementation until 1994 or later.

Pending

Due to changing needs, these recommendations will probably not be implemented.

*The star symbol is used to denote recommendations that Ecology considers very significant. An explanation of why these recommendations are considered significant is included in a box following the implementation status update.

Table 1.
Implementation Status of State Plan Recommendations

Recommendation		(I) Implementation	(IP) In Process	(O) Ongoing	(A) Awaiting	(P) Pending
1.1	Changing Legislative Policy on HW Priorities	I				
1.2	Review of Pollution Prevention Plan Effectiveness	I				
1.3	Certifying Management According to Plan				A	
1.4	Using the <i>Do The Right Thing Study</i> in P2 Planning	I				
1.5	Private Consumer Choice	I				
1.6	Recycled Content				A	
1.7	Cross-Media Inspections	I				
1.8	Cross-Media Ecology Task Force				A	
1.9	Research Needs on Waste Management Priorities		IP			
1.10	✚ Investigate Alternatives to Recycling Reg. System	I				
1.11	Technical Assistance	I				
1.12	Economic Incentives and Disincentives				A	
2.1	✚ “Close to Home” Policy			O		
2.2	Impact of State-Only Wastes				A	
2.3	On-Site or Local Management			O		
2.4	In-State Management - Sizing Based on Need	I				
2.5	In-State Management - State Control of Facility Devel.					P
2.6	In-Region Management	I				
2.7	Interstate Equity of Waste Management					P
3.1	Setting Priorities and Developing Long-Term Strategy	I				
3.2	✚ Compliance Resources		IP			
3.3	Generator Contact Frequency		IP			
3.4	Pilot Project: Point System		IP			
3.5	Pilot Project: Flexibility in Inspection Content		IP			
3.6	Pilot Project: Increased Generator Contact		IP			
3.7	Staff Turnover	I				
3.8	Training	I				
3.9	Appropriate Levels of Oversight	I				
3.10	Revamp the Authorization Process					P
3.11	Federal Regulation Development Process	I				
3.12	Changing the State Dangerous Waste Regulations		IP			

Recommendation		(I) Implementation (IP) In Process (O) Ongoing (A) Awaiting (P) Pending				
3.13	Measuring Compliance		IP			
3.14	Assessment of Economic Benefit	I				
3.15	Permit Staff Resources and Permit Fees	I				
3.16	Simpler Permits for Simpler Facilities				A	
3.17	Permit Application Guidance				A	
3.18	Permit Modification Process	I				
3.19	✚ Corrective Action	I				
3.20	✚ Cleanup Authority	I				
3.21	Legal Services					P
3.22	Environmental Laboratory Services				A	
3.23	Quality of Transporters				A	
4.1	Improvements to Citizen/Proponent Negotiation Process					P
4.2	Timing of Permit Decisions					P
4.3	Monitoring Permit Conditions					P
5.1	✚ Data Quality of Annual Reports	I				
5.2	✚ Linking Waste Generation and Waste Management	I				
5.3	Tracking Changes Over Time				A	
5.4	Future Projections of Waste Volumes and Types				A	
5.5	Waste Reduction Measurement		IP			
5.6	Waste Reduction Progress Tracking and Projections	I				
5.7	Waste-Specific Research					P
5.8	Tracking the Progress of the State HW Plan	I				
6.1	Overall Hazardous Waste Education Strategy			O		
6.2	Hazardous Waste Program Focus			O		
6.3	Hazardous Waste Education in Schools			O		
6.4	Overall Moderate Risk Waste Education Strategy			O		
6.5	Moderate Risk Waste Plan Implementation Funding	I				
6.6	Waste Reduction Training in Higher Education	I				
TOTAL		25	9	6	11	8

A brief description of the progress made by Ecology, Environmental Protection Agency (EPA), and others in implementing each of these recommendations as categorized in Table 1, is also provided in this chapter. The recommendations in Table 1 in the implementation category of "Awaiting" are discussed in Chapter 2.

State Plan Recommendations That Have Been Implemented

Recommendations in this category are those which have been completed (or are nearly complete at publication of this report) and little or no new work will be required in the future. In essence, these recommendations call for a specific “product” and that product has been produced.

Recommendations are categorized as “Implemented” if they have been carried out as defined in the State Plan. Recommendations for legislative changes are considered to be implemented when an earnest attempt was made to carry them out as prescribed in the State Plan. The legislative proposals have not passed for reasons beyond Ecology’s control. The recommendations in this chapter are in the order of appearance in the original State Plan.

Changing Legislative Policy on Hazardous Waste Priorities

The State Plan recommended that the waste management practice of Energy Recovery be considered as a separate and distinct category from Waste Recycling. It was recommended that Energy Recovery be inserted into the waste management hierarchy above Treatment, but below Waste Recycling. This would align the Hazardous Waste Management Act with the language of the Hazardous Waste Reduction Act. Legislation to amend the waste management hierarchy as recommended was introduced in the 1993 legislative session. This agency request legislation was packaged with the two other recommended legislative changes from the State Plan (as noted in this section), but that package was not included in the administration’s legislative package. Subsequently, House Bill 1690 which adopted the language of the agency request legislation was introduced, but this bill died in Senate committee. Further attempts at implementing the legislative proposals outlined in the State Plan are uncertain at this time. (Recommendation #1.1)

Review of Pollution Prevention (P2) Plan Effectiveness

In an initial attempt to evaluate the effectiveness of P2 planning, Ecology produced a report to the Legislature in 1993, on the measurable reductions in waste generation and other achievements. Some highlights of the 1993 report related that, as a result of the changes brought about by (P2) planning as well as regulatory changes and voluntary efforts by business, 11,500 tons of hazardous waste that otherwise would have been generated were avoided. In addition, hazardous substance use was reduced by 17,500 tons in 1992. (#1.2)

Using the *Do the Right Thing Study* in Pollution Prevention Planning

The waste-specific background research in the *Do The Right Thing Study* has been used in an effort to increase the recycling of aluminum potliner. Also, Ecology has and will continue to use the study as a reference document when reviewing P2 planning summaries and when targeting technical assistance to businesses. (#1.4)

Private Consumer Choice

When possible, Ecology will assist environmental and other organizations in educating the public regarding the overall environmental costs of consumer products. As an example, Ecology’s Think First, Cut Waste Campaign focused on solid and hazardous waste reduction including the generation of household toxics. The agency’s 1-800-RECYCLE hotline provides assistance to consumers on how to make environmentally smart choices. (#1.5)

Cross-Media Inspections

To test the capability of cross-media inspections to increase efficiency and service, Ecology's Eastern Regional Office conducted several cross-media site visits/inspections. An analysis of these two- and three-program inspections showed three important results:

- ❖ The facilities inspected preferred the multi-media approach.
- ❖ A small team (two-program) approach to multi-media site visits is the most realistic technique. It is too onerous a task for one person to be proficient in more than one program. With an individual from each of the programs, a site visit can be conducted efficiently for both Ecology and the facility.
- ❖ The multi-media approach to permitting is viewed as having very limited usefulness at this time due to the small number of facilities that have air, water and TSD permits.

As stated in Substitute House Bill 1743, Ecology is directed to conduct a pilot multi-media program to coordinate actions such as permitting, technical assistance, and inspections. A report evaluating the feasibility of expanding the program will be submitted to the legislature on January 1, 1996. (#1.7)

Investigate Alternatives to Current Recycling Regulatory System

The *Regulatory Impediment Study* (Ecology Publication No. 93-16), completed in February 1993, examined impediments to recycling hazardous waste, and also developed solutions to eliminate those impediments. Almost all of the recommendations in that study have been implemented. Ecology has been extensively involved in working with EPA and the Association of State and Territorial Solid Waste Management Officials to develop recycling regulations in conjunction with work on the proposed Hazardous Waste Identification Rule. The regulation amendments passed in December 1993 provide regulatory exclusion for wood ash, a high pH waste, resulting from the burning of untreated wood and wood

fiber materials. It is anticipated that this exclusion will promote the use of wood ash as a soil amendment. (#1.10)

When this recommendation to investigate regulatory alternatives was incorporated into Ecology policy, numerous projects either underway or under consideration were found to be connected. One example is the update of Ecology's Treatment by Generator guidance that provides specific information and greater flexibility in determining what a generator can do to treat waste on-site. This was a recommendation from the Regulatory Impediment Study which resulted in a change in program policy and an amendment to include it in the Dangerous Waste Regulations.

Technical Assistance

The technical assistance needs identified in the *Do The Right Thing Study* (Ecology Publication No. 92-58) were key factors in Ecology's development of the *Toxics Reduction Technical Assistance Plan* (Ecology Publication No. 92-35) and the twenty-one resulting industry specific long-term technical assistance strategies. Types of technical assistance have included workshops and seminars with individual industries to provide education on how to reduce the use of chlorinated solvents and vapor degreasers in parts cleaning operations. Ecology has provided technical assistance on topics such as the design of a format for the exchange of information about paint stripping operations and the manufacture of printed circuit boards. (#1.11)

In-State Management — Sizing Based on Need

A recommendation to limit the size of new commercial incineration or land disposal facilities based on need was the second part of the legislative package proposed in the 1993 legislative session. The future of this and the other State Plan legislative recommendations remains uncertain. (#2.4)

In-Region Management

Washington State will continue to work with other Pacific Northwest states to assure that the region provides the necessary capacity to manage the wastes generated within the region. To that end, Washington participated in a regional agreement with 16 other western states that produced the *1993 Capacity Assurance Plan* (Ecology Publication No. 94-127). This plan demonstrates the region's ability to manage the hazardous waste generated in the west. (#2.6)

Setting Priorities and Developing Long-Term Strategy

Joint priority setting for the Hazardous Waste and Toxics Reduction Program by Ecology and EPA has grown. Ecology and EPA enjoy an atmosphere of cooperation evolving into a mutually agreeable strategy to set priorities and develop strategies. (#3.1)

Staff Turnover

To reduce the employee turnover rate within the Hazardous Waste Program the State Plan recommended such things as better salaries and flexibility in work hours to attract and retain qualified staff in the program. Ecology adopted an innovative policy on flextime in January 1992, and two years later a policy on telecommuting. The specifications of several key job classifications have recently been modified with the goal of better recruitment and retention of qualified staff. The Hazardous Waste Program's staff turnover rate has decreased and fewer staff are leaving. While this has eliminated the need for a study, the issue of competitive salaries is still a chronic agency-wide problem. (#3.7)

Training

Training opportunities have been expanded to assist the agency in improving efficiency and achieving consistency among field staff. The Hazardous Waste and Toxics Reduction Program has dedicated one staff position to examining how pollution prevention and waste minimization can be a priority in all program activities. Staff from the former Waste Reduction, Recycling and Litter Control

Program have been trained about the Dangerous Waste Regulations and RCRA to integrate compliance and pollution prevention skills so staff can provide the best service possible. (#3.8)

Appropriate Levels of Oversight

EPA's facility level oversight activities within the Hazardous Waste and Toxics Reduction Program have been reduced in recent years allowing both agencies to focus resources in other areas. Work by both parties has formed a strong relationship between Ecology and EPA. This should ensure continued interagency cooperation. (#3.9)

Federal Regulation Development Process

When developing or revising regulations, it was recommended that EPA consider the impacts of those regulations on state programs and resources. Implementation of this recommendation is up to EPA. EPA recently sought to include input from states in the national roundtable on the Hazardous Waste Identification Rule development process. EPA has indicated that this level of effort to involve the states in major rule development processes may continue, but that for most regulation proposals we can expect less effort to involve the states. (#3.11)

Assessment of Economic Benefit

Ecology has sought to eliminate any economic benefit from noncompliance. Ecology added a discretionary factor to the Program Enforcement Policy to offset any potential financial benefits. Ecology staff can now use an EPA computer model called BEN (for the economic benefit of non-compliance) which uses the "time value of money" concept to determine the economic gains from non-compliance or even delayed compliance. (#3.14)

Permit Staff Resources and Permit Fees

As part of the legislative package proposed in 1993, this recommendation

sought authority to develop a service-based permit review fee. This fee was designed to recover costs to the state associated with permit application review. As with the other portions of this legislative package, the future of this recommendation is uncertain. (#3.15)

Permit Modification Process

The EPA permit modification process was adopted into the Dangerous Waste (DW) regulations to allow minor changes to a permit. Minor modifications can be made to existing permits without the former resource intensive process. This conserves staff resources while maintaining environmental protection. (#3.18)

Corrective Action¹

Ecology revised the DW regulations to include corrective action (CA) requirements and received authorization to implement the CA provisions under RCRA in 1994. Ecology's CA regulations and authorization rely, in part, on authorities from the state's Model Toxics Control Act (MTCA) which allow Ecology to conduct contaminated site cleanups. The MTCA regulations will be used to implement CA requirements. MTCA's cost recovery mechanism will partially fund CA work. (#3.19 - 3.20)

Receiving corrective action authorization and EPA endorsement of the MTCA regulations to implement CA requirements is a significant accomplishment for the state of Washington. Washington was the first state to gain authorization of a RCRA corrective action program which relies on existing state Superfund-like authorities. The project is considered a national model for State/EPA partnership and corrective action authorization. Benefits to the state include: reduced regulatory duplication, clear and consistent definition of cleanup standards, and the ability to fund the program, in part, through cost-recovery.

CA authorization also represents a significant increase to Ecology's workload. EPA figures indicate that the CA program can involve up to one-half of a full time staff position per facility. Ecology has identified over 100 facilities which may be required to implement CA.

1 Corrective action is the cleanup of contaminated RCRA management facilities seeking or required to have a permit to treat, store or dispose dangerous waste.

Ecology is in the process of overhauling the annual reporting process to simplify it and to increase the accuracy, timeliness and usefulness of the data collected from generators and TSDs. The new Annual Report forms will be tested in a pilot project in 1994. It is anticipated that all generators will use the new forms in 1995. The new forms will provide more information from in-state facilities about total available capacity to manage hazardous waste, as well as information on the amount of materials recycled. (#5.1 - 5.2)

This recommendation represents a major change in Washington's hazardous waste information collection system. Management of ~~hazardous waste in Washington will be~~ improved by collection of a wider range of information and faster analysis of data. Washington's information system will become equivalent to the federal Biennial Reporting System for hazardous waste information collection.

Waste Reduction Progress Tracking and Projections

An information collection system has been developed and is being used to collect data provided by Annual Progress Reports. That data is then used to track the waste reduction progress of P2 Plans (see Review of P2 Plan Effectiveness, page). This information will eventually be linked to a facility needs assessment model. (#5.6)

Tracking the Progress of the State Hazardous Waste Plan

This report is the first update to the State Plan. It fulfills the recommendation to provide an update of the implementa-

tion status of each of the State Plan's recommendations. Regular progress reports allow Ecology staff to refer to the original plan which ensures that staff continue to pursue the recommendations and goals of the plan. (#5.8)

Moderate Risk Waste Plan Implementation Funding

Funding for the implementation of Moderate Risk Waste Plans is provided by the Local Toxics Control Account and the Hazardous Waste Assistance Account. In 1992 — 1993, local governments received a total of \$10.3 million for Moderate Risk Waste Plan implementation. Additional funding needs for implementing Moderate Risk Waste Plans are not anticipated at this time. (#6.5)

Waste Reduction Training in Higher Education

Ecology continues to work to integrate waste reduction into curricula at universities and community colleges. In conjunction with Washington State University (WSU), Ecology's Eastern Regional Office has developed nationally recognized curricula on pollution prevention and environmental auditing. Ecology has also instituted an internship program for WSU students who have completed a pollution prevention course. That program places students with county governments or Ecology to work on hazardous waste management or toxics reduction projects. These curricula should be made available to other universities in the near future. Ecology has also prepared a technical school curriculum which provides a pollution prevention education guide for automotive repair shops. (#6.6)

Recommendations in process are those that have been initiated and will culminate in a product, when they are complete. These include pilot projects that have started, but may not have been

State Plan Recommendations That Are In Process

Research Needs on Waste Management Alternatives

The State Plan recommended enlisting the Pacific Northwest Pollution Prevention Research Center (Center) to act as an independent reviewer of the demonstration and research projects in the *Do The Right Thing Study* (Ecology Publication No. 92-58). In that role, the Center would have determined which projects are feasible for removing technical barriers to managing wastes at higher levels on the waste management hierarchy and promoting those projects to Ecology and the Legislature for funding. The Center has not been able to provide this service. The progress made in some of those research areas have been profitable. One project was designed to target a high volume waste in Washington by recycling a spent potliner from aluminum smelters. (Recommendation #1.9)

† Compliance Resources

To increase compliance, Ecology is looking at a number of ways to improve the use of compliance resources and develop new resources. (#3.2)

An increase in efficient use of compliance resources is a good idea at any time, but even more so in these times of budgetary belt tightening. Recommendations 3.4 - 3.6 and 3.13, cite specific examples of how Ecology is working to increase efficiency. Ecology has sought to "do more with less" and is approaching the goal of achieving compliance with the Dangerous Waste Regulations. The State Plan directed Ecology to formally establish once-per-year contact frequency goals for TSDs and major generators. The emphasis continues to be on the use of alternative forms of generator contact such as education, technical assistance and other methods. While inspections are excellent for contacting generators and encouraging compliance, resources dedicated to technical assistance will reach more businesses and result in an overall higher level of regulatory compliance.

The goal of inspecting every major generator every year has been met. Inspections of major generators has increased from 16 in 1990 to 26 in 1993. The pilot projects described below have helped Ecology to reach this goal. (#3.3)

Pilot Project: Point System

The State Plan called for the development of standardized inspection forms. These forms were to include a point system to provide a measuring index of generator compliance with the regulations and a data base of inspection information. Ecology conducted a pilot project which yielded a point system, a computerized inspection report, and a consistent data base of inspection information. The computerized reports and inspection data base are discussed further in the pilot project on Flexibility in Inspection Content (Recommendation 3.5, below). The point system was used in the pilot project on Measuring Compliance (Recommendation 3.14). (#3.4)

Pilot Project: Flexibility in Inspection Content

This project called for Ecology to experiment with simplifying state inspections by varying the level of detail of inspections on a case-by-case basis. The Point System pilot project helped provide the capability for automatic generation of computerized inspection reports and post-inspection compliance letters, orders or penalties. These reports will simplify inspection follow-up actions. Ecology's four regional offices all utilize the computerized inspection reporting system. The data base of inspection information provides a tool to assist the Hazardous Waste and Toxics Reduction Program in tracking inspections and education efforts.

From July 1992 to June 1993 approximately 120 state priority (non-EPA mandated) inspections/technical visits were accomplished. Streamlining the inspection reporting process should increase the time available for more technical site visits and state priority inspections. (#3.5)

Pilot Project: Increased Generator Contact

Recent initiatives by Ecology to increase its contact rate with the regulated community include:

- ❖ The New Notifier Project which is designed to ensure that every business which applies for a State/EPA ID number receives a visit from Ecology, who will provide technical assistance on HW management and compliance with the DW regulations. From program inception through 1993, we made 525 new notifier visits. In the Northwest Regional Office, one full-time staff position has been dedicated to providing pollution prevention technical assistance through this project.
- ❖ Single-Industry Campaigns which focus on one type of industry, such as the automotive industry concentrate education efforts about the importance of regulatory compliance. The Automotive "Shop Sweep" Campaign resulted in 1,250 visits to repair and other automotive service shops across the state. During these visits generators received specific waste management and pollution prevention recommendations, compliance information and written materials.
- ❖ The Central Regional Office is piloting an effort to visit all regulated generators on an informal basis to provide technical assistance where needed. It is the goal of this effort to promote pollution prevention and increase compliance by meeting generators during visits which are not

inspections. Such visits help generators to manage their wastes according to the regulations. By developing a relationship based on cooperation and trust, it is hoped that long-term gains in compliance will be realized as well. (#3.6)

(Note: A compilation of the summaries of Pilot Projects 3.4 - 3.6 is available upon request.)

Pilot Project: Measuring Compliance

Ecology has developed a pilot rating system as a tool to measure compliance at the individual facility level. This "point system" is intended to improve measurement of compliance with the DW regulations on a statewide basis. Objective measurement of compliance has proven to be a difficult task and the rating system has not yet been implemented. EPA has also taken an interest in measuring compliance and is spearheading a work group with the Region 10 states to take up this challenge. (#3.13)

Changing the State Dangerous Waste Regulations

In 1993 Ecology sought to simplify and reformat the regulations making them easier to understand and use. Additionally, a new approach was developed for distributing the regulations to users. Regulation interpretation documents were combined into a one-step guidance pack-

age to help the regulated community better understand the regulations and make compliance an achievable goal.

A major regulatory reform effort is currently underway, focusing on the proper designation and management of certain wastes. See Chapter 3 for a discussion of this project. (#3.12)

Waste Reduction Measurement

The changes in the Annual Report forms described earlier in this chapter will also provide some of the information needed to measure waste reduction efforts. Ecology is one of four states participating in a national pilot project to test various methods of measuring pollution prevention. Due to be completed in

use as a guide by the program or the agency.

Ongoing State Plan Recommendations

✦ “Close to Home” Policy

The goal of this policy is self-sufficiency of waste management in the Pacific Northwest region as a whole and the management of waste as close to the source of generation as possible. The Close to Home Policy is a new way of thinking about HW management. It is implemented indirectly through related activities. (Recommendation #2.1)

On-Site or Local Management

Active promotion of the on-site management of waste is exemplified by two recent policy changes at the Department of Ecology. First, a decision was made to bring to the forefront the realization that the risks of waste management are minimized only when waste management is done appropriately, close to the source of generation. Second, written guidance and a regulatory framework has been reflected in Ecology's way of thinking and actions. Increased emphasis on on-site waste management has been one significant effect of this policy.

1994, the goal of the project is to develop a means of measuring pollution prevention to provide useful data for generators, Ecology and EPA. (#5.5)

Recommendations in this category are, for the most part, proposed as long-term policies with no endpoint or product. These policies are implemented on an ongoing basis. Since they have been initiated, these policy oriented recommendations have provided a philosophy for

amendment were prepared to allow greater latitude for treatment of wastes by generators. The amendment allows waste treatment on-site by the generator without requiring a RCRA permit if that treatment occurs in tanks or containers used for the accumulation of the wastes to be treated. Treatment of wastes may be conducted in tanks or containers within certain time limits. A treatment/storage permit is not required provided all applicable standards for tanks and containers are met. Ecology may develop a way to track and predict the proposed off-site shipment of wastes from the cleanup of contaminated sites. (#2.3)

Overall Hazardous Waste Education Strategy

Ecology's education efforts target specific audiences and aim at increasing generator awareness of their responsibilities in properly managing hazardous waste. In the time since the State Plan was published, pollution prevention education has also become a major part of Ecology's

educational activities. Educational outreach has included compliance workshops, preparation of written materials and non-inspection oriented or technical assistance site visits. Specific industries have been targeted for pollution prevention technical assistance. Industry specific efforts include: publishing *A Guide for Fruit Packing Warehouses*; workshops with small boatyards; information exchange and education with the large shipyards on hull coatings and other pollution prevention opportunities; and a new project targeting printers and photoprocessors.

In addition to these Ecology initiated efforts, there are four Pollution Prevention Networks across the state designed to share information about waste reduction and waste management issues. Located in Spokane, Yakima, the Kelso/ Longview/ Vancouver area, and the Puget Sound area, these open networks are made up of people from industry, business, public agencies and citizens who meet regularly to share pollution prevention information. This information is then disseminated to an even wider audience through network sponsored annual expositions in the Puget Sound, Kelso/Longview/Vancouver and Spokane areas. (#6.1)

Hazardous Waste Program Focus

The Hazardous Waste and Toxics Reduction Program is committed to continuing to increase our emphasis on compliance education and more recently, to pollution prevention education. An example of this is the automotive repair industry campaign conducted by Ecology in 1992. Approximately 1,250 auto repair shops across the state were visited by Ecology and local government staff who provided technical assistance and education. The focus of those visits was to advise the shop owners about how to manage their hazardous wastes in compliance with the regulations. A similar single industry campaign focusing on pollution prevention is underway for printers and film developers.

The Hazardous Waste and Toxics Reduction Program's recent Pilot Pesticide Waste Compliance Project² provided education and technical assistance on managing pesticide wastes. Workshops, site audits and five different guidance handouts were the conduits used to supply training and education to over 3,000 pesticide users. This project examined potential and known generators of pesticide wastes in the manner described in Recommendation 3.13, Measuring Compliance. Compliance levels were measured for hazardous waste generators who do not notify Ecology of their actions in addition to those who do report to Ecology.

Ecology continues to provide regulatory interpretation information on subjects such as used antifreeze and treated wood waste. Publications such as fact sheets, technical information memoranda or other regulatory interpretations are made available to interested parties. Announcements of these publications are made through industry and trade association newsletters and Ecology's own quarterly publication on hazardous waste *Shoptalk*. Designed to be an information conduit to hazardous waste generators, the circulation for *Shoptalk* has topped 24,000 individuals and groups. *Shoptalk* provides compliance information to more generators on a quarterly basis than Ecology could hope to achieve in a year through all other means. *Shoptalk* and other compliance education efforts will continue to be a priority for Ecology. (#6.2)

Hazardous Waste Education in Schools

Ecology continues to support education about hazardous waste and toxics reduction through curriculum guides and school visits to students including those in technical and vocational schools. (#6.3)

Overall Moderate Risk Waste Education Strategy

As of January 1993, all moderate risk waste plans had been approved by Ecology. With the start of implementation of these plans, local governments are increasingly assuming the role as lead agencies to provide information and technical assistance to moderate risk waste generators as recommended in the State Plan. Actual implementation measures vary from plan

to plan, but many include making site visits to small quantity generators (SQGs). In addition, complaints received at Ecology's regional offices on SQGs are now turned over to or coordinated with local governments for follow-up. (#6.4)

Generally, recommendations in this category are those which were slated for implementation after 1993, or they are contingent on a prerequisite such as the availability of funding. Several of the recommendations categorized in Table 1 as "Awaiting" are scheduled for implementation within the next two years. These are discussed in greater detail in Chapter 2.

State Plan Recommendations Awaiting Implementation

Certifying Management According to Plan

This State Plan recommendation would amend the Hazardous Waste Reduction Act to *require* generators to manage wastes according to their pollution prevention plan. The need to implement this recommendation will be evaluated in the 1995-1997 biennium when Ecology will decide if it is necessary to pursue implementation. (Recommendation #1.3)

Impact of State-Only Wastes

Before listing any new waste, the impact on the capacity of state and regional hazardous waste management facilities to handle wastes should be examined. New wastes are rarely listed so the implementation of this recommendation must wait until the opportunity arises. The DW Regulatory Reform Project discussed in Chapter 3 is also related to this recommendation. (#2.2)

Recommendations in this category are those that are not scheduled for implementation in the near future or will not be implemented at all due to changing needs. An explanation as to why a recommendation is in this category is included in the discussion following each recommendation.

In-State Management — State Control of Facility Development

This recommendation only suggests

Other Recommendations Pending

that the Legislature examine the inconsistencies in the law that make it difficult to meet the goal of managing wastes “close to home.” State involvement in siting, owning and/or operating hazardous waste management facilities would be a major policy change from Ecology’s current approach. The first step, a legislative proposal, is unlikely in the near future. (Recommendation #2.5)

Interstate Equity of Waste Management

Washington continues to support efforts at the congressional level to allow states the authority to levy differential fees on HW imports to compensate for the risk posed by managing wastes from out-of-state. Despite Washington’s lack of commercial disposal and incineration facilities, Ecology’s support of this policy is a commitment to implementing the Close to Home Policy. National interest will direct the fate of this proposal. The continued volatility of the Interstate Commerce Act Clause of the U. S. Constitution may continue to present an obstacle to fulfilling this recommenda-

tion. (#2.7)

Revamp the Authorization Process

Washington has recommended to encourage EPA to consider changing the RCRA authorization process to allow a self-certification. Washington has Corrective Action authorization from EPA (see Corrective Action, page). The state will not benefit from any changes in the authorization process since any changes will come after we have completed the process. The National Governors’ Association, the Association of State and Territorial Solid Waste Management Officials and EPA all agree that the authorization process needs

to be revamped. EPA has taken no action to change the authorization process. (#3.10)

Legal Services

The recommended increase in program access to specialized legal advice through additional hiring is unlikely due to budgetary constraints. The Attorney General Office has assigned staff to work on hazardous waste issues which will facilitate easier access to legal expertise for all program staff. (#3.21)

Improvements to the Citizen/Proponent Negotiation Process

This is a recommendation to monitor the CPN process for effectiveness and consider how it will work in conjunction with the Impact Mitigation Plan. Only one project, the Grant County incinerator proposal, had been using this process. The project permit application has been set aside as part of the new EPA and Ecology Hazardous Waste Reduction and Combustion Strategy. (See page for an explanation). Implementation of this recommendation is unnecessary until review of the permit application is resumed. (#4.1)

Timing of Permit Decisions

This recommendation was to examine the permit process to determine if an earlier decision on the fate of a permit application is possible. Implementation of this recommendation has been put on hold until staff time allows. (#4.2)

Monitoring Permit Conditions

This recommendation was to assure that Ecology has adequate resources to provide ongoing performance review for large commercial incineration and landfill facilities. Unless and until it becomes apparent that a large commercial incineration and landfill facility will be built in Washington, this recommendation will be tabled. (#4.3)

Waste-Specific Research

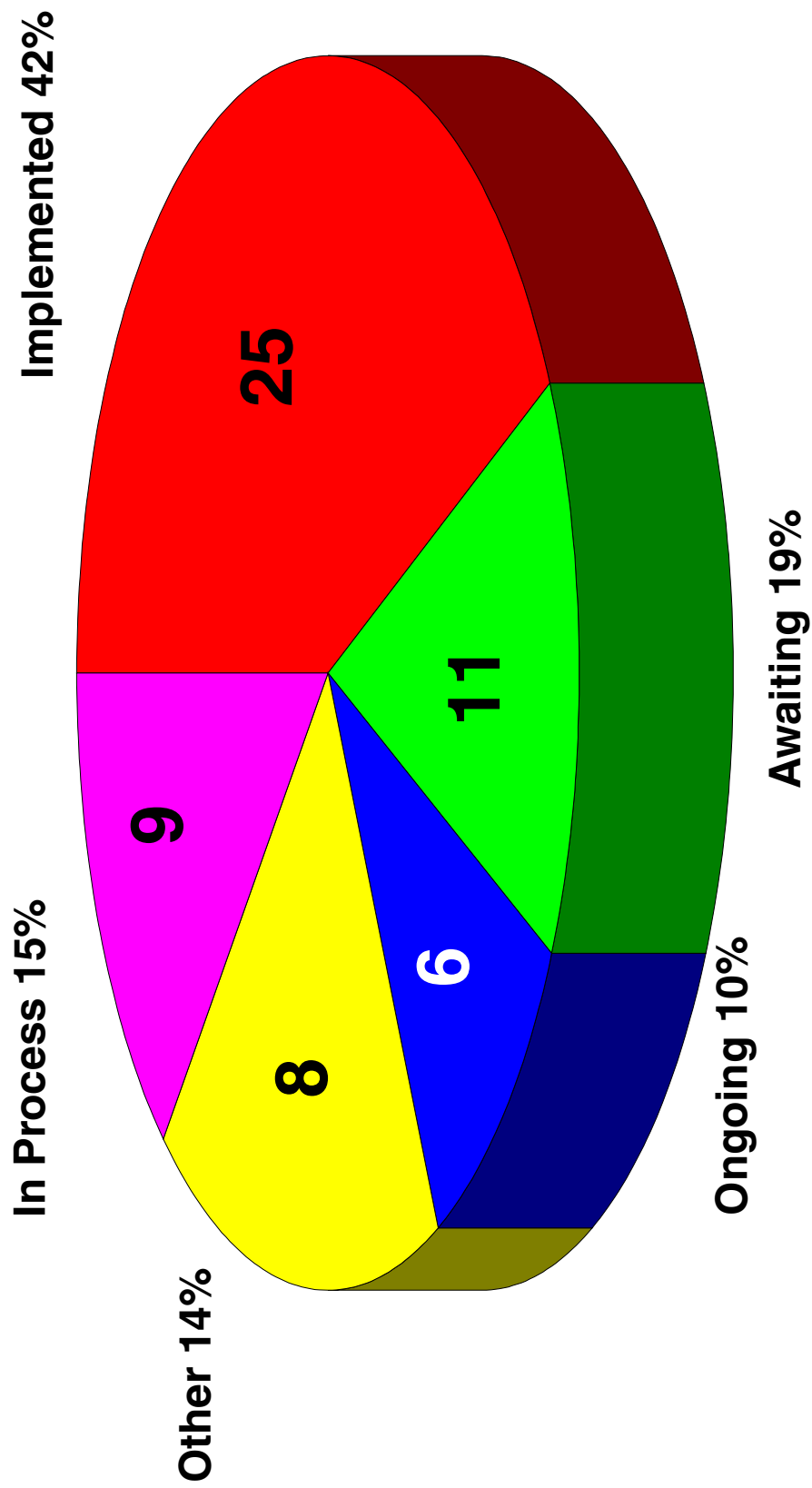
This recommendation was to expand on the existing waste-specific research by

evaluating the effect of disposal costs on waste generation. Due, in part, to budget cuts, funding for further research is unlikely at least until 1997. (#5.7)

Implementation Record for Recommendations

Figure 1 (page 17) shows that in the two years since the State Plan was completed a majority of the fifty-nine recommendations have either been implemented, are in process or are ongoing (a combined total of 40). Of the remaining nineteen recommendations, over one-half (11) are awaiting implementation and eight fall into the "Other" category. Chapter 2 discusses those recommendations that are awaiting implementation and are scheduled for work in the next biennium.

**Figure 1.
The 59 State Plan Recommendations —
Where Are They Now?**



CHAPTER 2

Work Schedule for Fiscal Year 1993 - 1995

The recommendations of the State Plan fall into two main classifications, "Policy" recommendations and "Action-Specific" recommendations. Generally, action-specific recommendations are those that call for a very focused, specific activity with an easily identified endpoint. While implementation of action-specific recommendations, such as Cross-Media Inspections, may result in changes in the way Ecology does business, they generally lack the far-reaching implications that accompany policy recommendations, e.g. Overall Hazardous Waste Education Strategy.

Chapter 1 showed that the policy recommendations have been implemented or they are being implemented, but for some it is an ongoing process and there is no end point. The policy recommendations in the State Plan are listed below. Each of these recommendations were discussed in detail in Chapter 1.

State Plan "Policy" Recommendations

- ❖ Changing Legislative Policy on Hazardous Waste Priorities
- ❖ "Close to Home" Policy
- ❖ On-Site or Local Management
- ❖ In-State Management - Sizing Based on Need
- ❖ Interstate Equity of Waste Management
- ❖ Overall Hazardous Waste Education Strategy
- ❖ Hazardous Waste Program Focus
- ❖ In-State Management - State Control of Facility Development

The other 51 recommendations in the State Plan can be classified as action-specific recommendations. The following is a list of those action-specific recommendations scheduled for implementation in 1994-95 with a description of the activity to occur.

State Plan "Action-Specific" Recommendations

Recycled Content

Ecology will evaluate the effectiveness of Second Substitute Senate Bill 5143 (since codified as RCW 43.19A) designed to increase the purchases of recycled content products by local and state government agencies and public schools. The Solid Waste Services Program will be working with General Administration and the Clean Washington Center to conduct forums in 1994 to educate local governments about the advantages of buying recycled content products. The forums will focus on products recycled from solid waste materials such as paper and compost, with information on recycled lubri-

cating oil and auto batteries included. (Recommendation #1.6)

Cross-Media Ecology Task Force

Ecology will establish an internal task force from various programs to identify statutory, regulatory and programmatic changes to limit the cross-media transfer of pollutants and to further pollution prevention efforts in the agency. (#1.8)

Economic Incentives and Disincentives

The (Hazardous Waste and Toxics Reduction) HWTR Program will work with other programs doing similar work to investigate the feasibility and desirability of economic incentives and disincentives in an overall waste management strategy. (#1.12)

Simpler Permits for Simpler Facilities

Hazardous Waste Permits staff will explore options for simplifying the permitting system for on-site storage of wastes. Potential changes will be limited, however, to modifications that do not require regulatory amendments. (#3.16)

Permit Application Guidance

An improved permit application guidance will be developed for facilities which store hazardous waste in containers and tanks. This will increase the efficiency of the permit application process by assisting permit applicants in filling out permit applications more accurately than they have in the past. The applicant's improved awareness of Ecology's expectations should decrease the amount of time and effort it takes to complete and approve permit applications. This work should be completed in 1994. (#3.17)

Environmental Laboratory Services

The State Plan recommends expanding the laboratory accreditation program to include solid waste methods. This recommendation is not scheduled for implementation until at least 1995. (#3.22)

Quality of Transporters

This recommendation promotes development of educational tools for hazardous waste generators to help them choose transporters wisely. An agency Focus Sheet explaining the requirements for the transport of hazardous waste was distributed in 1993. Ecology will work with the Utilities and Transportation Commission and other entities to produce a brochure for generators. (#3.23)

Tracking Changes Over Time

To conduct this project the HWTR Program will have the state's fifty largest generators compare their current annual dangerous waste report to their previous year's report and explain any major changes. Information from this project will be helpful in the analyses of trends in waste generation and to make waste generation projections for future planning efforts. (#5.3)

Future Projections of Waste Volumes and Types

The HWTR Program will investigate the feasibility of improving projections of the amount and type of hazardous wastes generated in the state. Methods for improved projections might include: Using generators own projections, using a non-recurrent waste projection methodology, and projections of the effects of regulatory change on future waste volumes. (#5.4)

CHAPTER 3

Where Are We Heading?

Dangerous Waste Regulatory Reform Project

In September 1993, Ecology embarked on a project to evaluate portions of the Dangerous Waste Regulations dealing with waste designated as dangerous under state-only criteria. It is intended that this project will culminate in substantial reforms to the Dangerous Waste Regulations based on the major changes to the RCRA program over the years. The goals of the Regulatory Reform Project are to:

- ◆ Ensure that the waste management hierarchy is emphasized;
- ◆ Achieve a cost-effective system that protects human health and the environment;
- ◆ Ensure that wastes are managed commensurate with the risks they pose;
- ◆ Simplify the regulations;
- ◆ Use current science for the designation of wastes; and
- ◆ Eliminate duplication with other rules.

With a focus on evaluating the proper designation and hence proper management of state-only classified hazardous wastes, the project is relying on input from an internal technical committee and an external advisory group. Here are some of the questions that these groups are grappling with:

- ◆ Where is the overlap between the state and the federal systems?
- ◆ Where do we draw the line between categories of waste?
- ◆ Are the regulations capturing the right wastes now?
- ◆ What changes can we make to enhance our pollution prevention mandate?

This project should be completed in 1994. Thereafter, a rulemaking process can begin to implement the project recommendations.

Impacts on State HW Planning

The impacts of this project on the State HW Plan are not immediately apparent although there are numerous possibilities. Any change in the waste categories that are currently regulated could have a profound impact on future projections of waste generation and demand for capacity. Reforming and simplifying the regulations could lighten

the workload for staff who work in regulatory enforcement, interpretation and amendments. In turn, this would provide more time for other generator contact efforts, thereby increasing overall compliance with the regulations. Enhancing pollution prevention opportunities through regulatory reform could similarly have far reaching impacts on the entire program.

Pollution Prevention Integration Strategy

The HWTR Program is developing a strategy to integrate pollution prevention into its day-to-day activities. This strategy examines how pollution prevention can be more fully integrated into activities within four areas of the HWTR Program.

Legislation and Regulation Development

Proposed legislation and new regulations will be analyzed with a focus on maximizing incentives for pollution prevention and minimizing the creation of barriers to pollution prevention. The impacts to all media (i.e., air, water, land) should be considered when developing new regulations or analyzing proposed legislation.

Compliance and Enforcement

Pollution prevention will become a component of all compliance, enforcement and technical assistance work including inspections, regulatory interpretations, and on-site visits to generators who are new to the hazardous waste regulatory system.

Permits and Corrective Action

Permitting for hazardous waste management facilities should be coordinated with other programs. Permit conditions should be developed which promote pollution prevention to the maximum extent possible.

Information and Data Collection

The information Ecology collects from generators should allow for the measurement of pollution prevention progress and the projection of future trends. Pollution prevention references and other information sources should be available to all staff.

In addition, the Hazardous Waste and Toxics Reduction Program is working on several projects which focus on pollution prevention. One is a multi-media technical assistance campaign called "Snap Shots" targeting printers and film processors.

Ecology's HWTR Program is collaborating with the Air, Water Quality and Solid Waste Services Programs, as well as, representatives from local governments and industry trade associations, to coordinate a campaign of technical assistance and on-site visits to screen printers, lithographers, and film processors that begin in September 1994. The goal of this effort is to assist these businesses in waste reduction and proper waste management. Through education and technical assistance, Ecology and local governments hope to provide the incentives and resources for printers and film processors to meet waste reduction goals and manage wastes responsibly. This campaign is the second such industry-specific effort. The success of the Automotive Shop Sweeps conducted in 1992-93 provided a springboard for the Snap Shots Campaign.

The second is a pollution prevention partnership project. The Hazardous Waste and Toxics Reduction Program has entered into a number of "partnerships" with other state agencies and businesses to promote pollution prevention. This partnership is intended to provide a better understanding of the roles and responsibilities of the agencies as they relate to pollution prevention and to create an opportunity for access to and exchange of information and technical assistance between agencies. Several tools have been developed (or are in process) through this interagency partnership to assist state agencies to communicate and coordinate in their activities to promote pollution prevention. These include:

- ◆ An electronic bulletin board for ongoing communication;
- ◆ A state agency environmental resource guide listing individuals from all state agencies and their pollution prevention expertise; and
- ◆ A list of state agency newsletters, listing the intended audience and area of focus. This list will improve information sharing between agencies and public distribution.

Ecology's partnership with business is

designed, in part, to provide or enhance industry access to federal grant funding for pollution prevention projects. Another example of how this partnership works is Ecology's development of a Vendor Data Base listing businesses and consultants, etc. which provide pollution prevention services, information, equipment or products. Another newly developed data base called the Pollution Prevention Opportunities Data Base lists pollution prevention practices and suggestions identified by generators through the pollution prevention planning process. To gain access to these data bases, contact any Ecology regional office.

In May 1994, Ecology adopted its Pollution Prevention Action Strategy. The strategy states that the agency's vision is to prevent the creation of pollutants, to conserve natural resources and to increase efficiency in the use of raw materials or resources. To do this all staff must be able to identify, implement and promote pollution prevention opportunities in their job. A key to implementing the agency strategy is the creation of a position to serve as the agency-wide pollution prevention coordinator. The guiding

principles of this strategy are that Ecology will:

- ◆ Work in partnership with private and public sectors to implement pollution prevention strategies;
- ◆ Seek creative solutions and incentives to achieve pollution prevention and minimize the cross-media transfer of pollutants;
- ◆ Provide assistance and regulatory services which reflect our commitment to pollution prevention;
- ◆ Educate the citizens of Washington about minimizing the human health and environmental effects and costs of our lifestyle choices; and
- ◆ Be a model in our commitment to pollution prevention.

Through these efforts, Ecology will focus more energy on pollution prevention and continue to promote the legislatively mandated waste management hierarchy, which lists pollution prevention as the number one priority.

EPA Hazardous Waste Reduction and Combustion Strategy

In May of 1993, EPA Administrator Carol Browner announced a new approach to hazardous waste management aimed at reducing the amount of hazardous waste generated in the U.S. and strengthening federal controls governing hazardous waste incinerators and boilers and industrial furnaces (BIFs). Parts of the strategy have already been implemented although it is still in draft form. The most significant action is that from May 1993 through October 1994, EPA hazardous waste permitting staff gave the highest priority to bringing existing hazardous waste incinerators and BIFs under permit controls. As a result, the processing of permit applications for new combustion facilities has been given a low priority.

Ecology announced in September of 1993 that staff previously processing the Environmental Security Corporation (ESC) permit application for a hazardous waste incinerator in Grant County would stop work on that application. Similar to EPA's strategy, Ecology's priority for hazardous waste permitting resources is dedicated to ensuring the safe operation of existing facilities managing hazardous wastes. Work on the ESC permit application will resume when permits have been issued to the existing facilities that are a high priority for receiving permits and when EPA completes its strategy for combustion facilities.

Other steps announced in EPA's draft Waste Reduction/Combustion Strategy are:

- ◆ A major overhaul of federal rules governing waste combustion;
- ◆ Requiring full risk assessments with all new combustion permits to ensure that permitting decisions are based on the best possible scientific data;
- ◆ New combustion permits will be required to include dioxin emission standards and there will be more stringent controls on metals emissions;

- ◆ A call for hazardous waste generators to commit to waste reduction programs;
- ◆ Convening of a task force of EPA and state officials (including Mary Riveland, Director of Ecology) to undertake a broad evaluation of the role of combustion in our national strategy on hazardous waste management; and
- ◆ A call for greater public participation opportunities in the permitting process.

EPA's plan to bring waste minimization to the forefront of the nation's hazardous waste management system hinges on persuading generators to make waste minimization their top waste management priority. Washington has already taken that step by passing the Hazardous Waste Reduction Act in 1990. The authority for Ecology to require pollution prevention plans stems from this act. While the plans are mandatory, implementation of those plans is voluntary. Progress reports from the generators of greater than 50,000 lbs. of hazardous waste indicate that 11,500 tons of HW that would have been generated in 1992 were avoided due, in part, to pollution prevention planning. This represents pollution prevention actions during only the last four months of 1992.

Other key steps planned by EPA in its development of a Final Strategy on Hazardous Waste Minimization and Combustion are as follows:

- ◆ A National Roundtable held in November 1993 at which members of industry, environmental groups, public interest groups and state government were engaged in a dialogue on waste minimization and combustion issues;
- ◆ EPA conducted three Regional Roundtables across the country in

February and March of 1994 to allow interested parties to participate in discussions on basic issues in waste minimization and combustion;

- ◆ A list of large quantity generators who are required to have waste minimization programs in place will be made publicly available in 1994;
- ◆ In late 1994 EPA anticipates releasing Final Guidance for Generators on Hazardous Waste Minimization which describes the basic elements of a hazardous waste minimization program; and
- ◆ The Final Strategy will be based on results of the National Roundtable, public dialogue from the Regional Roundtables and EPA's own analyses of waste generation and management on a national basis.

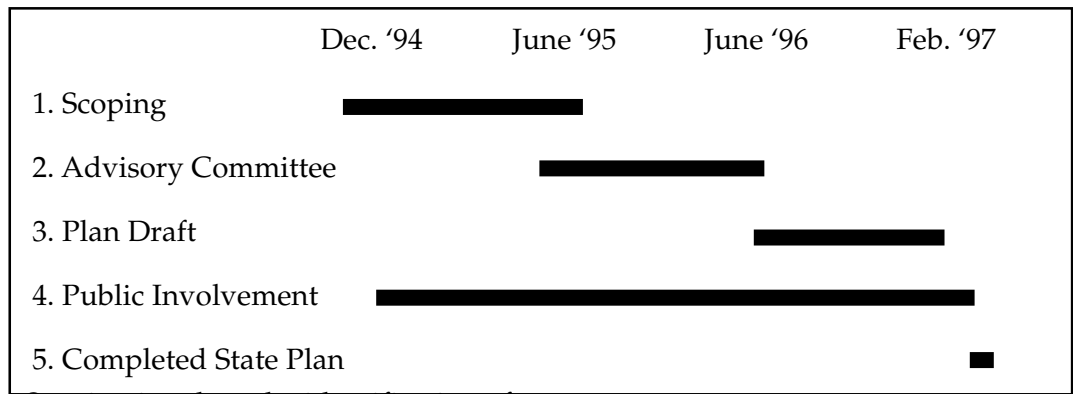
While the full impacts of EPA's Waste

Reduction/Combustion Strategy are not yet clear, its effect has already been felt in Washington. The EPA strategy has effected Ecology, causing a change in priorities. This has meant a shift in focus from hazardous waste permitting to processing permits for existing facilities. The net result is a shift of resources away from processing the permit application for the proposed ESC hazardous waste incinerator. Those resources have instead been applied to the review of applications for existing facilities. As of May 1994, the ESC permit application is the only combustion related application under direct review by the Department of Ecology and is currently the only such application being impacted by the shift in permit review resources.

Implementation is scheduled to be completed by November 1994. At the end of that period (November 1994) EPA is scheduled to have completed its Final Hazardous Waste Minimization/Combustion Strategy. The resulting course of action and changes in policy are difficult to foresee, but based on recent events it would be fair to assume that some permanent changes in national policy on hazardous waste management are imminent.

Revising the State Plan

As mentioned in the Introduction, Ecology will develop a new State Plan every six years. Ecology's goal is to complete the first major revision in 1997. Below is a rough schedule of activities to develop Washington's revised State Hazardous Waste Plan.



Scoping involves the identification of issues, needs, projects, etc. that the State Plan should address. Public involvement would occur throughout the process, but would be the most extensive during scoping. An advisory committee will be used to provide Ecology with perspectives from citizens, environmental groups, business, industry and government about the direction and intent of the State Plan.

The State Plan includes a provision to

provide a plan update every two years. The next update is due in 1996. This task is included in Ecology's work plan, however, less effort and detail can be expected for the 1996 update. This scaling back of resources to be expended on the next State Plan Update is due to the substantial progress made to date in implementing the State Plan's recommendations. That success rate meant a considerable amount of time was spent documenting progress in this publication, this documentation will be unnecessary in the 1996 Update.

CHAPTER 4

Ecology's Achievements

What have we gained from our efforts to implement the State Plan? Evaluating the effectiveness of a plan in terms of environmental benefits is inherently difficult especially since the State Plan contains 59 recommendations addressing a bounty of issues. The State Plan's recommendations are qualitative, focused changes to the hazardous waste management system which are difficult to measure.

The evaluation of qualitative changes relies on assumptions. The most basic assumption is that there are environmental benefits from having a hazardous waste management system in place to safely manage the hazardous wastes we generate. The benefits include:

- ◆ Safe management and disposal practices;
- ◆ Lower incidence of intentional dumping and accidental releases;
- ◆ Incentives for waste reduction, recycling, and toxics use reduction;
- ◆ Safeguards against spills during transportation;
- ◆ Guidelines for the cleanup and closure of contaminated sites; and
- ◆ Reduced worker exposure to hazardous waste.

A follow-up assumption would be that

making improvements to this system will also result in environmental benefits. The State Plan was designed to do just that by acting as a feedback mechanism to determine how well the hazardous waste management system is working. Then, by examining the areas of concern within the hazardous waste management system and recommending improvements, it is assumed that further environmental benefits would be gained. The benefits from implementing the State Plan's recommendations have come in the form of both tangible and intangible accomplishments.

As documented in Chapter 1, a tangible accomplishment has been the focus on increasing Ecology's presence within the business community with an emphasis on providing education and technical assistance. In 1990, Ecology had some form of direct contact with approximately 500 regulated generators. Bolstered by pollution prevention planning efforts and compliance education initiatives, that number increased to approximately 4,700 in 1993. This higher rate of direct Ecology contact with businesses which generate hazardous waste translates to a more educated regulated community. These businesses can be expected to have a higher overall level of compliance with the regulations, easier access to information about waste reduction and recycling, and increased use of these options. Ecology's increased presence within the business community has tangible environmental benefits.

Other tangible accomplishments of the State Plan include:

- ◆ Completion of a study examining the barriers to recycling and how to overcome those barriers. Most of the recommendations of this study have been implemented including improving Ecology's technical assistance capabilities. Ecology has also worked extensively with EPA to develop better recycling rules and guidance;
- ◆ Ecology has obtained authorization from EPA to conduct corrective action cleanups at all RCRA management facilities in Washington. If this had not been done, these facilities would otherwise have been relegated to a waiting list dependent upon limited EPA staff resources;
- ◆ Promotion of major changes in the information Ecology collects from hazardous waste generators and waste management facilities and the manner in which it is collected; and
- ◆ The adoption of what has become known as the "Close to Home Policy." This policy advocates managing wastes as close to the source of generation as possible to reduce environmental risks. Ecology has since updated its regulations and guidance to allow greater latitude regarding the treatment of wastes on-site by generators.

Implementation of the State Plan has also resulted in some intangible accomplishments. While these accomplishments are important, they work indirectly to achieve an increase in environmental benefits. These intangible accomplishments generally relate to an increase in efficiencies of service provided by Ecology. Better services such as education and technical assistance do not translate into direct, measurable environmental effects, but they do provide a return on the investment through indirect impacts. For example, indirect impacts due to State Plan initiatives may reduce or eliminate waste generation by assisting small generators with solvent recycling or

by education about what constitutes a hazardous waste and how it can be safely managed to prevent environmental contamination. Below is an illustration of some of the increased service efficiencies the State Plan has provided:

- ◆ Ecology provides pollution prevention expertise plus regulatory compliance expertise in a non-enforcement atmosphere, affording generators with a more complete service. As a result, the agency's image is changing from that of a hard-nosed regulatory agency to that of a public service oriented regulatory agency which has helped to foster the beginnings of a more cooperative relationship with the business community;
- ◆ Education, information and technical assistance were targeted as a program priority. Specific audiences were selected for focus. Ecology has therefore efficiently reached more generators than ever before with the information and assistance they need;
- ◆ Changes continue to be made to simplify the regulations and the permitting process;
- ◆ By using the authority and the regulations of the state Model Toxic Control Act rather than the federal guidelines to conduct corrective action cleanups, Ecology will save time and money; and
- ◆ Increasing the efficiencies of field staff through computerized inspection reporting, freeing staff time for field work rather than paper work.

The process used by Ecology in the development of the State Plan also

yielded the following reports published by Ecology (see page):

- ◆ *Do the Right Thing Study*: Background Document to the Washington State Hazardous Waste Plan. This report was designed to provide a basis for estimating future waste reduction potential to be used in the Needs Assessment for Washington. Nine individual waste streams were studied to identify current practices, determine the best management for these wastes, to ascertain the potential of achieving this management, and to understand all the barriers to achievement.
- ◆ *Needs Assessment for Washington*: Background Document to the Washington State Hazardous Waste Plan. This report examines past and future hazardous waste management. Trends are used to project waste generation. Future demand for hazardous waste storage is projected with an analysis of impacts of moderate risk wastes, regulatory changes, clean-up wastes and out-of-state wastes. Commercial capacity needs are examined under three possible scenarios, each with its own implications.
- ◆ *An Evaluation of Atypical Hazardous Waste*: Background Document to the Washington State Hazardous Waste Plan. Six atypical waste streams are examined to determine how the state can best regulate these wastes. Atypical wastes were selected as those (which are both) already addressed by other federal and state programs, and are state hazardous waste.

accomplishments resulting from the implementation of the State Plan are significant. Accomplishments such as a wider presence for Ecology within the regulated community, more efficient use of staff resources and more comprehensive service delivery are making improvements in environmental quality. Implementation of the State Plan has brought substantial environmental benefits, through earlier research during the State Plan development process and by making improvements to the hazardous waste management system.

¹ *Corrective action is the cleanup of contaminated RCRA management facilities seeking or required to have a permit to treat, store or dispose dangerous waste.*

² *Pilot Pesticide Waste Compliance Project, Department of Ecology, February 1993.*

Together, the tangible and intangible